

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1-30. (Canceled)

31. (Currently Amended) A method of screening an agent for toxic activity and a therapeutic activity *in vivo* comprising:  
administering the agent to a teleost *in vivo*;  
detecting *in vitro* or *in situ* a change in expression of a protein or mRNA in a specific organ or tissue of the teleost responsive to the agent relative to the expression of the protein or mRNA in the specific organ or tissue of a teleost to which the agent has not been administered, the change in expression indicating toxic activity in at least one tissue or organ of the teleost administered the agent; and  
assessing whether the agent is effective to promote the therapeutic activity in the teleost.

32. (Canceled)

33. (Previously Presented) The method of claim 31, wherein the change in the teleost indicating toxic activity is detected in at least two tissues, at least two organs, or at least one tissue and one organ simultaneously.

34. (Canceled)

35. (Previously Presented) The method of claim 31, wherein the agent is administered to at least two teleosts and a response is detected indicating toxic activity in each of said at least two teleosts simultaneously.

36. (Previously Presented) The method of claim 35, wherein each of said at least two teleosts is contained in a well of a multi-well plate.

37. (Previously Presented) The method of claim 36, wherein the wells of the multi-well plate have a volume of 300 microliters or smaller per well.

38. (Previously Presented) The method of claim 36, wherein the wells contain the teleosts in a volume of 50-200 microliters per well.

39 (Currently Amended) The method of claim 31, wherein the teleost is contained within a well of a multi-well plate having a volume of 300 microliters or smaller.

40. (Currently Amended) The method of claim 31, wherein the teleost is contained within a well of a multi-well plate in a volume of 50-200 microliters.

41. (Currently Amended) A method of screening an agent for toxic activity *in vivo* comprising:

administering the agent to culture media containing a teleost with a chorion *in vivo* whereby the agent permeates the teleost; and

detecting *in vitro* or *in situ* a change in expression of a protein or mRNA in a specific organ or tissue of the teleost responsive to the agent relative to the expression of the protein or mRNA in the specific organ or tissue of a teleost to which the agent has not been administered, the change in expression indicating toxic activity in at least one tissue or organ of the teleost administered the agent.

42. (New) A method of screening an agent for toxic activity *in vivo* comprising:

administering the agent to a teleost *in vivo*; and

detecting a change in expression of a protein or mRNA in a specific organ or tissue of the teleost responsive to the agent, a response in the teleost indicating toxic activity in the at least one tissue or organ of the teleost.

43. (New) The method of claim 42, wherein the response in the teleost indicating toxic activity is detected over time.

44. (New) The method of claim 42, wherein the response in the teleost indicating toxic activity is detected in at least two tissues, at least two organs, or at least one tissue and one organ simultaneously.

45. (New) The method of claim 44, wherein the response in the teleost indicating toxic activity is over time at predetermined intervals.

46. (New) The method of claim 42, further comprising administering the agent to at least two teleosts and detecting a response indicating toxic activity in each of said at least two teleosts simultaneously.

47. (New) The method of claim 46, wherein each of said at least two teleosts is contained in a well of a multi-well plate.

48. (New) The method of claim 47, wherein the wells of the multi-well plate have a volume of 300 microliters or smaller per well.

49. (New) The method of claim 47, wherein the wells contain the teleosts in a volume of 50-200 microliters per well.